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FILE: ▪ Rosehip (*Rosa canina*)
▪ Osteoarthritis
▪ Pain

HC 060183-358

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RE: Efficacy of Rosehip (*Rosa canina*) as a Pain-Reducing Agent in Persons with Osteoarthritis

Christensen R, Bartels EM, Altman RD, Astrup A, Bliddal H. Does the hip powder of *Rosa canina* (rosehip) reduce pain in osteoarthritis patients?—a meta-analysis of randomized controlled trials. *Osteoarthritis Cartilage.* 2008;[epub ahead of print].

Osteoarthritis (OA) is a common disorder of the synovial joints in the body, particularly of the hands, knees, hips, and spine. The symptoms of OA include pain, stiffness, restricted movement, and cracking of joints. OA has traditionally been thought of as a non-inflammatory condition; however, improvements in detection methods have shown that inflammatory pathways are up-regulated in this disorder.

The oral analgesic paracetamol (aka, acetaminophen) is the first line of therapy for OA and the preferred choice for long-term use. If paracetamol is not efficacious, non-steroidal anti-inflammatory drugs (NSAIDs) must be considered. However, an alternative therapy is a special standardized rosehip (*Rosa canina,* Rosaceae) powder from Langeland Island, Denmark, which has been evaluated in short-term randomized controlled trials (RCTs) for its efficacy in ameliorating the symptoms of OA. The results of these trials appear to be consistent.

Evidence from early experiments indicated that rosehip exerted anti-inflammatory activity via a reduction in the chemotaxis (i.e., the movement of cells [or unicellular organisms] with reference to a chemical agent) of peripheral blood neutrophils and monocytes in healthy subjects and decreased C-reactive protein concentrations in patients with OA. To review and evaluate the most up-to-date clinical data on the efficacy of rosehip compounds in treating symptoms associated with OA, these authors conducted a meta-analysis of published trials.

A systematic literature search of several databases (e.g., EMBASE, Medline, and Cochrane Library) was conducted to identify RCTs of OA treatment with this rosehip powder that

included a placebo group. Only studies that included patients with clinical or radiographic evidence of OA were selected for review. Two reviewers performed the data extraction independently, and disagreements were resolved through discussion. The following data were recorded: authors, year of publication, design, duration of study, number of patients randomized (i.e., intention-to-treat population), patient age and sex, and site of OA (e.g., knee, hip, neck, etc.). The primary outcome measure was the level of pain reduction. Secondary outcome measures included the change in the amount of pain-reducing agents used, the number of responders to therapy, and adverse outcomes.

Three RCTs met the inclusion criteria for analysis: one was conducted in an outpatient clinic in Norway and two were conducted in outpatient clinics in Denmark.[1-3] All three trials were supported by the manufacturer of the supplement (Hyben-Vital® [also known as Litozin® Hyben-vital®] is made by Hyben-Vital International, Tullebølle, Langeland, Denmark; in North America and many countries outside of Europe, this rose hip material is distributed by DSM [Basel, Switzerland] under the trade name i-flex™).

Combined, the 3 trials included a total of 306 OA patients who were allocated in equal numbers to receive rosehip powder or placebo for 3 to 4 months at a dose of 5g per day. Most of the patients were women (62%), most had OA of the knee (61%), and the median age of the subjects was 66 years.

The change in pain scores was significantly greater in the rosehip group than in the placebo group ($P = 0.0019$), and the efficacy was consistent across all 3 trials. The pain-reducing ability of rosehip appeared to be greater in patients awaiting hip or knee surgery. In one of the studies, the use of analgesics was reduced significantly in the rosehip group compared with the placebo group. The total number of responders was 94 of 153 patients (61.4%) in the rosehip group and 65 of 153 patients (42.5%) in the placebo group.

A traditional and widely consumed food, the rosehip showed considerable safety. Adverse effects were minimal, with approximately the same number of cases of mild gastrointestinal discomfort (e.g., acid regurgitation, diarrhea, and constipation) being reported in both study groups.

Overall, the analysis showed a "small to moderate short-term efficacy of preparations with *R. canina* hip powder with a small but clinically relevant reduction of pain in OA patients." The lack of heterogeneity among the 3 trials supports the findings of rosehip's efficacy. However, the authors note that their conclusion was based on the results of only 3 clinical trials, all of which were short term (3-4 months in duration). Furthermore, the same product was tested in all 3 studies. Ideally, similar products from different manufacturers should be tested, which the authors suggest "would increase the external validity of any proposed herbal therapy." However, insofar as the Langeland rosehip powder is derived from a particular chemotype that grows in this area, and since the company holds a patent on the use of rosehip (and any member of the genus *Rosa*) for use in OA, it is problematic whether other rosehip products will be able to be tested or marketed for this use.

—Brenda Milot, ELS

References
1. Warholm O, Skaar S, Hedman E, Mølmen HM, Eik L. The effects of a standardized herbal remedy made from a subtype of *Rosa canina* in patients with osteoarthritis: a double-blind, randomized, placebo-controlled clinical trial. *Curr Ther Res Clin Exp.* 2003;64(1):21-31.
2. Rein E, Kharazmi A, Winther K. A herbal remedy, Hyben Vital (stand. powder of a subspecies of *Rosa canina* fruits), reduces pain and improves general wellbeing in patients with osteoarthritis—a double-blind, placebo-controlled, randomised trial. *Phytomedicine.* 2004;11(5):383-91.
3. Winther K, Apel K, Thamsborg G. A powder made from seeds and shells of a rose-hip subspecies (Rosa canina) reduces symptoms of knee and hip osteoarthritis: a randomized, double-blind, placebo-controlled clinical trial. *Scand J Rheumatol.* 2005;34(4):302-308.

The American Botanical Council has chosen not to include the original article.